

Waste Watchers

Project Learning Tree Activity #73

Program of Studies

Science:

- S-P-SI-1 (Ask simple scientific questions that can be answered through observations.)
- S-P-SI-2 (Use simple equipment (e.g., aquariums), tools (e.g., magnifiers, spoons), skills (e.g., observing, pouring), technology (e.g., video discs), and mathematics in scientific investigations.)
- S-P-SI-3 (Use evidence (e.g., observations) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- S-P-SI-4 (Design and conduct different kinds of simple scientific investigations.)
- S-P-SI-5 (Communicate (e.g., speak, draw) designs, procedures, and results of scientific investigations.)
- S-P-SI-6 (Question scientific investigations and explanations of other students.)
- S-P-AC-2 (Examine the interaction between science and technology.)
- S-4-ESS-3 (Earth's materials have different physical (e.g., capacity to retain water) and chemical (e.g., ability to support plants) properties and provide resources that humans use.)
- S-5-SI-1 (Use simple equipment (e.g., plant lights), tools (e.g., rulers, thermometers), skills (e.g., describing), technology (e.g., electronic media), and mathematics in scientific investigations.)
- S-5-SI-2 (Use appropriate equipment (e.g., watches), tools (e.g., rain gauges), techniques (e.g., classifying), technology (e.g., calculators), and mathematics in scientific investigations.)
- S-5-SI-3 (Use evidence (e.g., classifications), logic, and scientific knowledge to develop scientific explanations.)
- S-5-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-5-SI-5 (Communicate (e.g., draw, speak) designs, procedures, and results of scientific investigations.)
- S-5-SI-6 (Review and analyze scientific investigations and explanations of other students.)
- S-5-AC-3 (Students will recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.)
- S-6-SI-2 (Use appropriate equipment (e.g., binoculars), tools (e.g., beakers), techniques (e.g. ordering), technology (e.g., calculators), and mathematics in scientific investigations.)
- S-6-SI-3 (Use evidence (e.g., orderings, organizations), logic, and scientific knowledge to develop scientific explanations.)
- S-6-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-6-SI-5 (Communicate (e.g., speak, write) designs, procedures, and results of scientific investigations.)

- S-6-SI-6 (Review and analyze scientific investigations and explanations of other students.)
- S-6-AC-2 (Recognize how science is used to understand changes in populations, issues related to resources, and changes in environments.)
- S-7-SI-2 (Students will use appropriate equipment (e.g., spring scales), tools (e.g., spatulas), techniques (e.g., measuring), technology (e.g., computers), and mathematics in scientific investigations.)
- S-7-SI-3 (Students will use evidence (e.g., measurements), logic, and scientific knowledge to develop scientific explanations.)
- S-7-SI-4 (Students will design and conduct different kinds of scientific investigations to answer different kinds of questions.)
- S-7-SI-5 (Students will communicate (e.g., write) designs, procedures, and results of scientific investigations.)
- S-7-AC-1 (Students will use science to evaluate the risks and benefits to society for common activities (e.g., riding on airplanes, choice of habitation).)
- S-8-AC-5 (Students will use science to evaluate the risks and benefits to society for common activities (e.g., riding on airplanes, choice of habitation).)

Math:

- MA-4-NC-3 (Students will understand the relative magnitude of whole numbers to 1,000,000.)
- MA-4-PS-4 (Students will pose questions, collect, organize, and display data.)
- MA-4-PS-5 (Students will draw conclusions based on data.)
- MA-6-GM-2 (Students will read and use measurement tools (e.g., rulers, scales).)

Social Studies:

- SS-7-G-2 (Students will examine how technology influences modifications of the physical environment.)

Core Content

Science:

- SC-E-SI-1 (Ask simple scientific questions that can be investigated through observations combined with scientific information.)
- SC-E-SI-2 (Use simple equipment (e.g., magnifiers, magnets), tools (e.g., metric rulers, thermometers), skills (e.g., classifying, predicting), technology (e.g., electronic media, calculators, World Wide Web), and mathematics in scientific investigations.)
- SC-E-SI-3 (Use evidence (e.g., observations, data) from simple scientific investigations and scientific knowledge to develop reasonable explanations.)
- SC-E-SI-4 (Design and conduct simple scientific investigations.)
- SC-E-SI-5 (Communicate (e.g., draw, graph, write) designs, procedures, observations, and results of scientific investigations.)
- SC-E-SI-6 (Review and ask questions about scientific investigations and explanations of other students.)
- SC-E-2.1.2 (Earth materials provide many of the resources humans use. The varied materials have different physical and chemical properties, which make them useful in different ways, for example, as building materials (e.g., stone, clay, marble), as sources of fuel (e.g., petroleum, natural gas), or growing the plants we use as food.)
- SC-E-2.2.1 (The Sun provides the light and heat necessary to maintain the temperature of Earth. The Sun's light and heat are necessary to sustain life on Earth.)
- SC-E-3.3.3 (All organisms, including humans, cause changes in the environment where they live. Some of these changes are detrimental to the organism or to other organisms; other changes are beneficial (e.g., dams built by beavers benefit some aquatic organisms but are detrimental to others).)
- SC-E-AC-2 (Examine how designing and conducting scientific investigations fosters an understanding of issues related to natural resources (e.g., scarcity), demonstrate how the study of science (e.g., aquariums, living systems) helps explain changes in environments, and examine the role of science and technology in communities (e.g., location of landfills, new housing developments).)
- SC-M-SI-2 (Use appropriate equipment, tools, techniques, technology, and mathematics to gather, analyze, and interpret scientific data.)
- SC-M-SI-3 (Use evidence (e.g., computer models), logic, and scientific knowledge to develop scientific explanations.)
- SC-M-SI-4 (Design and conduct scientific investigations.)
- SC-M-SI-5 (Communicate (e.g., write, graph) designs, procedures, observations, and results of scientific investigations.)
- SC-M-SI-6 (Review and analyze scientific investigations and explanations of other students.)
- SC-M-1.3.1 (Energy is a property of many substances and is associated with heat, light, electricity, and sound. Energy is transferred in many ways.)
- SC-M-1.3.4 (The Sun is a major source of energy for changes on Earth's surface. The Sun loses energy by emitting light. A tiny fraction of that light reaches Earth, transferring energy from the Sun to Earth.)
- SC-M-AC-1 (Describe how science helps drive technology and technology helps drive science. Because perfectly designed solutions do not exist, technological solutions have intended benefits and unintended consequences.)

- SC-M-AC-2 (Describe the individual's roles and responsibilities in the following areas: changes in populations, resources and environments including ecological crises and environmental issues, natural hazards, science and technology in society, and personal and societal issues about risks and benefits.)
- SC-H-2.1.1 (Earth systems have sources of energy that are internal and external to the Earth. The Sun is the major external source of energy. Two primary sources of internal energy are the decay of radioactive isotopes and the gravitational energy from Earth's original formation.)
- SC-H-3.5.5 (Human beings live within the world's ecosystems. Human activities can deliberately or inadvertently alter the dynamics in ecosystems. These activities can threaten current and future global stability and, if not addressed, ecosystems can be irreversibly affected.)

Math:

- MA-E-1.1.2 (The operations of addition, subtraction, multiplication, and division.)
- MA-E-3.1.3 (The process of using data to answer questions (e.g., pose a question, plan, collect data, organize and display data, interpret data to answer question).)
- MA-E-3.2.2 (Collect, organize, and describe data (e.g., drawings, tables, charts).)
- MA-E-3.3.1 (How data are used to draw conclusions.)

Social Studies:

- SS-M-4.4.1 (Technology assists human modification of the physical environment (e.g., damming a river, irrigating a desert, cooling or heating a living area).)
- SS-M-4.4.4 (Individual perspectives impact the use of natural resources (e.g., watering lawns, planting gardens, recycling paper).)